been met by the amendment of the application, applicants will submit an amended Declaration and Power of Attorney expressly claiming benefit of U.S. Serial No. 08/625,163.

Applicants submit herewith, as Attachment A a copy of the allowed claims in U.S. Serial No. 08/625,163. With respect to the claims being "allowed," however, applicants wish to note that issuance of U.S. Serial No. 08/625,163 has been withdrawn at applicants' request to allow consideration of cited patent documents identified in a Partial International Search and/or in a Written Opinion, both issued in connection with a PCT application corresponding to this U.S. application. Such cited patent documents have been made of record in this application, including the above-mentioned German and Swiss patent documents for which translations are submitted concurrently herewith.

Substantive Claim Examination. Claims 1-113 are pending in the application, of which claims 31-59 stand withdrawn from consideration pursuant a restriction requirement made final by Examiner Michl in the subject Office Action. Claims 1-31 and 60-113 stand rejected under 35 U.S.C.§103(a) over Kafka (U.S. patent No. 5,205,972).[1] The Examiner asserts that Kafka discloses mixing latex and an aqueous slurry of filler material in an extruder and coagulating. In that regard, the Examiner asserts that the extruder taught by Kafka is encompassed by the coagulating reactor recited in certain of the rejected claims.

Applicants respectfully traverse the rejection of the claims. Kafka teaches a traditional wet mixing technique requiring the use of an acid or salt solution or other coagulant and/or mechanical shearing. That is, Kafka does coagulate latex, but does so through the action of coagulants or mechanical shearing after the latex and filler have already been mixed:

> "The elastomer latices are coagulated in the extruder. Suitable coagulants used in the present process include aqueous solutions of salt, such as calcium chloride, aluminum sulfate, sodium chloride, sodium sulfate, or sodium acetate. Cationic soaps such as polyoxypropylene methyl diethyl ammonium chloride (EMCOLCC-9) and aqueous polyamine solutions can also be used, either alone or in conjunction with salts, to neutralize the anionic surfactants used to stabilize latices. Alternatively, mechanical

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[1]Applicants understand the Examiner to have rejected only claims 1-30 and 60-113, since claim 31 is directed to apparatus and stands withdrawn from consideration pursuant to the above-mentioned restriction requirement made final by the Examiner. Applicants request an indication from the Examiner if, in fact, he intended to reverse the withdrawal of claim 31 from consideration.

> coagulation of the elastomer can be conducted by introducing a second high pressure section between the elastomer latex/aqueous slurry injection point and the waste liquid removal point, the latex being coagulated by high shear in this region. Cylindrical barrel-filling screw bushings can be used for this purpose to subject all passing elastomer to high sustained shear. Chemical coagulation is preferred." (Col. 4, lines 32-49.)

So, Kafka teaches the use of chemical coagulates, just like numerous other patents already of record in this application, or the use of high shear mechanical coagulation after the latex and filler have been mixed. <u>Nowhere does Kafka suggests coagulating an elastomer latex by the very act of feeding a particulate filler under pressure to a continuous flow of elastomer latex</u>.

In fact, Kafka teaches directly away from the present invention. More specifically, Kakfa directs the reader to use low shear conventional mixing when blending the latex with the aqueous slurry of fibrous filler to prevent premature partial coagulation.

> "It is preferable to use low shear conventional mixing techniques when blending the latex with the aqueous slurry to prevent premature partial coagulation. Thus one or more elastomer latices such as polychloroprene latex or a styrene/butadiene latex can be preblended with the aqueous slurry of organic fibrous filler and the resultant blend fed to the coagulation dewatering extruder. Alternatively, the elastomer latex and the aqueous slurry of fibrous fillers can be added as separate streams to the extruder. (Col. 4, lines 20-29.)

Again, Kafka clearly teaches only prior known coagulation techniques, avoiding even partial coagulation by the mixing and filler of elastomer fluids. Nothing in Kafka could be said to teach or suggest feeding a particulate filler fluid under pressure to an elastomer latex sufficiently energetically to substantially completely coagulate the elastomer latex with the particulate filler.

Similarly, Kafka fails to teach or suggest the product claims of the present application. Certainly, Kafka fails to teach the process limitations of the product-by-process claims of the present application for the all reasons discussed above.

Moreover, as explained in the present specification (see, for example, page 7, lines 21-23; page 10, lines 17-20; page 121, lines 1-9), prior known methods, such as taught by Kafka, did not achieve the present invention's highly advantageous macro-dispersion of particulate filler in the elastomer. Present claim 64 for example, defines the elastomer composite having maco-dispersion less than 0.2%

undispersed area. Nothing in Kafka suggests that it achieve maco-dispersion better than that asserted by more recently issued patents, such as Bohm et al. As discussed by applicants in response to the previous Office Action, Bohm et al expressly note the industry's desire to achieve better dispersion, and speak of achieving a dispersion index which "increased markedly" (Col. 8, line 18) from 76.5 to 98.2. (see Table III of Bohm et al). But Bohm et al's 98.2 dispersion value corresponds to a macro-dispersion of 1.8% undispersed area. In comparison, the macro-dispersion value of 0.2% undispersed area called out in present claim 64 is an order-of-magnitude better than the "increased markedly" value of 1.8% boasted by Bohm et al to be so much better than could be achieved by the earlier technologies (exemplified by Kafka).

Thus, in the absence of any clear teaching by Kafka that it achieved the extraordinary macro-dispersion levels of the present invention, and faced with the more recent teaching in Bohm et al of macro-dispersion levels said to be markedly better than anything previously achieved (and yet an order of magnitude worse than the present invention), applicants submit that the patentability of the present claims is clearly established.

As a final matter, applicants wish to traverse the presumption recited by the Examiner, that the compositions recited in claims 60-112 are the products resulting from the method of claims 1-31 and 113. The methods defined by each of those method claims are, of course, not identical to each other. Thus, a given elastomer composite, as defined by any of claims 60-112, may well be the product of one such method claim, but not the product of another. Moreover, the process limitations should not be read into those of claims 60-112 in which they do not appear. Patentability rests, in each case, on the totality of the claim, including in some cases, but not all, recited macro-dispersion levels, process limitations, etc.

Claims 60-112 are rejected under 35 U.S.C. §103(a) over Inoue et al or Asai et al or Simonet et al. These patents are said by the Examiner to disclose mixing elastomer and filler to achieve macro-dispersion. The Examiner acknowledges, however, that none of them specifically recites the numerical values for macro-dispersion recited in the present claims. Nevertheless, the Examiner asserts that it would be obvious to one of ordinary skill in the art to practice the teaching of the cited patents to achieve macro-dispersion of 0.2%. The rejection is respectfully traversed for the reasons discussed above. Inoue et al, Asai et al and Simonet et al involve the kinds of mixers which Bohm et al found to yield inadequate macro-dispersion. The more recent Bohm et al boasts that it markedly improved upon